

Types of Pain & Pain Gate Theory

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PAIN

Types of pain:

1. Acute pain: associated with tissue damage.
2. Chronic pain: pain that remains after apparent tissue healing.
3. Somatogenic pain: pain from body wall and viscera.
4. Referred pain: provoked in deep structure but recognized superficially.
5. Neurogenic pain: often burning sensation.
6. Psychogenic pain: pain influenced by psychological factors.

PAIN

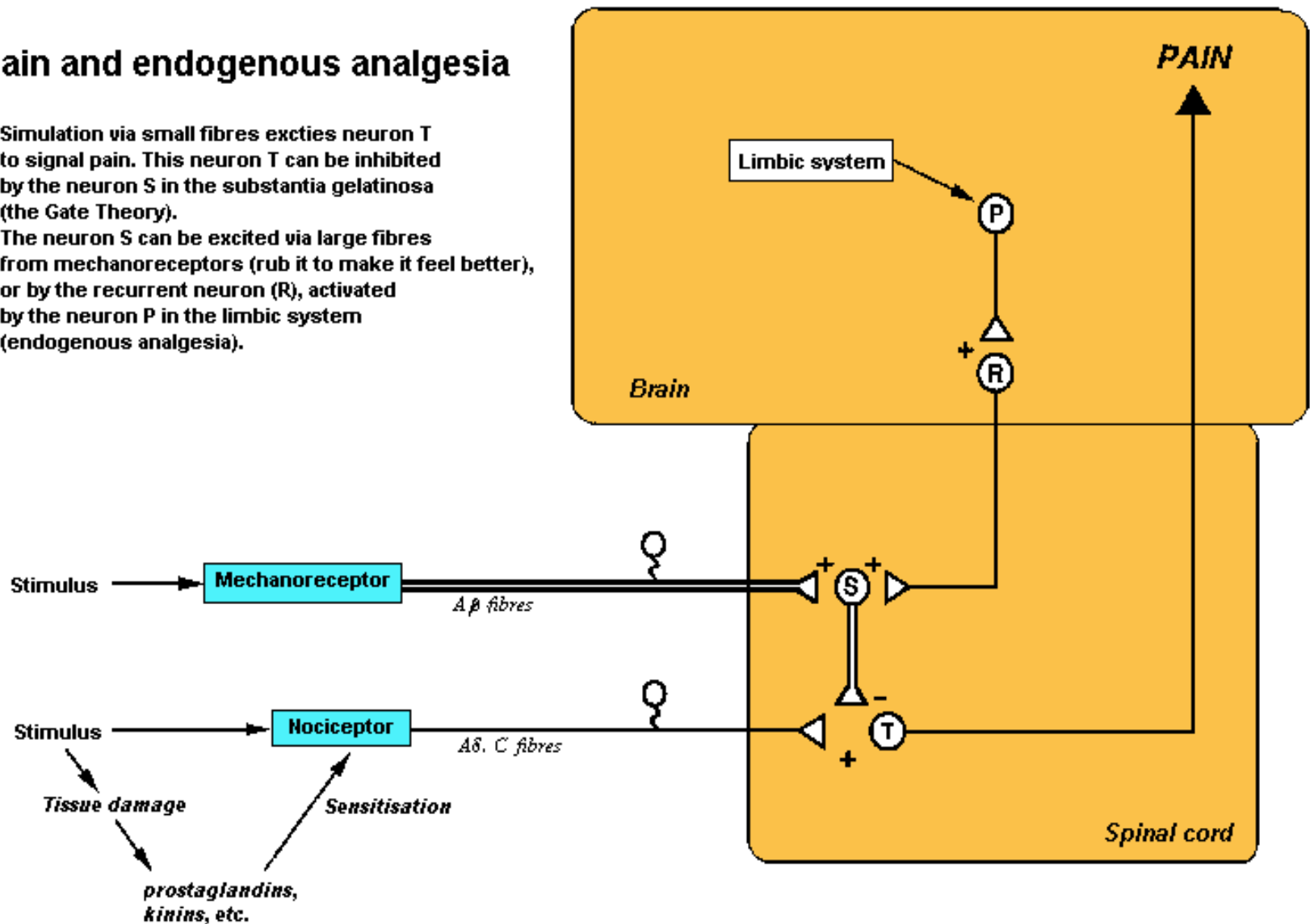
Control of Pain

- o Pain Gate Theory in 1956 by *Melzack and Wall*
 - o It is that pain perception is regulated by a gate which may be opened or closed by means of other inputs from peripheral nerves or from central nervous system, thus increasing or decreasing the pain perceived.
- o A beta ($A\beta$) fibers are a low threshold mechanoreceptors which give off collaterals on nociceptors cell of A delta and C fibers.

Pain and endogenous analgesia

Simulation via small fibres excites neuron T to signal pain. This neuron T can be inhibited by the neuron S in the substantia gelatinosa (the Gate Theory).

The neuron S can be excited via large fibres from mechanoreceptors (rub it to make it feel better), or by the recurrent neuron (R), activated by the neuron P in the limbic system (endogenous analgesia).



PAIN

Control of Pain ... cont.

- There are collateral branches of A delta fibres connect with Interneurons which produce enkephalin that inhibit the C fiber.
- A delta fibers can be stimulated by high intensity, low frequency TENS to inhibition C fiber-type pain.